

BELK DECLARATION--

According to my commission in this matter I offer this declaration of facts and opinion in Case No. 13-0086-CV-W-ODS

FACTS

1. The Walker fire control has a history of more than six decades of dangerous failures and uncertain operations.
2. The Walker failures are nearly all confined to miss-placement of the part known as the 'connector'.
3. The connector is not, nor has it ever been, a necessary part of over-ride trigger operations. The connector is extraneous to good trigger design and makes the Walker trigger unduly dangerous.
4. The role of the connector, as called out by the Walker-Haskel patent, is provably false.
5. The connector introduced an uncertainty of mechanical motion into the trigger mechanism that is dangerous and defective and should be replaced.

OPINION

1. A mechanism containing a solid trigger without a connector is 'safer than' a trigger mechanism containing a loosely held extraneous part as long as the other important details are the same.
2. Re-positioning the trigger piece on application of the safety *in case the return springs don't* adds a degree of safety absent in the Walker trigger and follows the path taken by Walker's designs of sixty years ago to improve the security of the Walker over-ride trigger.
3. The XMP trigger offers greater security and a more certain operation than the Walker.
4. The XMP trigger is well mounted, well made and well designed.
5. The XMP trigger uses an MIM material for the trigger piece who's longevity is in doubt and was specifically warned against by Mike Walker.
6. It has been observed the XMP trigger will not last as long as the rifle to which it is mounted due to inferior materials in the trigger part.
7. A broken, rounded, worn XMP trigger is just as dangerous to the shooter and people within about two miles of the shooter as the Walker trigger.
8. All trigger systems MUST have the proper materials, the proper geometry and the proper alignment to be a safe and long-lasting trigger. That has been the case for centuries. The XMP does not fulfill these requirements.
9. The damage caused in normal use of the XMP trigger can not be seen by the shooter and is progressive in nature. This makes it unduly dangerous.
10. It is the nature of all firearms to be potentially dangerous. A hundred years ago most firearms were designed to be safer than currently manufactured guns. The reason they aren't is directly traceable to Remington Arms Co. and their use of Constitutional protections to cheapen and degrade historically safe guns into dangerous guns supplied to unsuspecting customers.
11. It is my opinion the trigger in any firearm should be the last part to break, wear out, degrade or fail in any way. It is my experience in 50 years of gunsmithing that the 'last to fail is the trigger' is the standard of firearms safety and has been for more than five hundred years.
12. There is no reason to not use the best material available in ever gun gun part, except for economics.
13. The standards of firearms safety should never be compromised for economic gain.
14. One hundred year old trigger parts of otherwise worn-out guns can be supplied at any time as exhibits. They're better made of better material than the currently produced XMP trigger.
15. Current manufacture of numerous bolt action rifles uses heat-treated, forged and milled steel trigger parts as is proper and historically correct and safe. There is no reason not to.

Trigger test---- received new XMP trigger and cover letter from Mr. Wills 12-4-2014. Undamaged, packaging secure, padded and unbroken. Sear retained in top by two short dowel pins with sear spring.

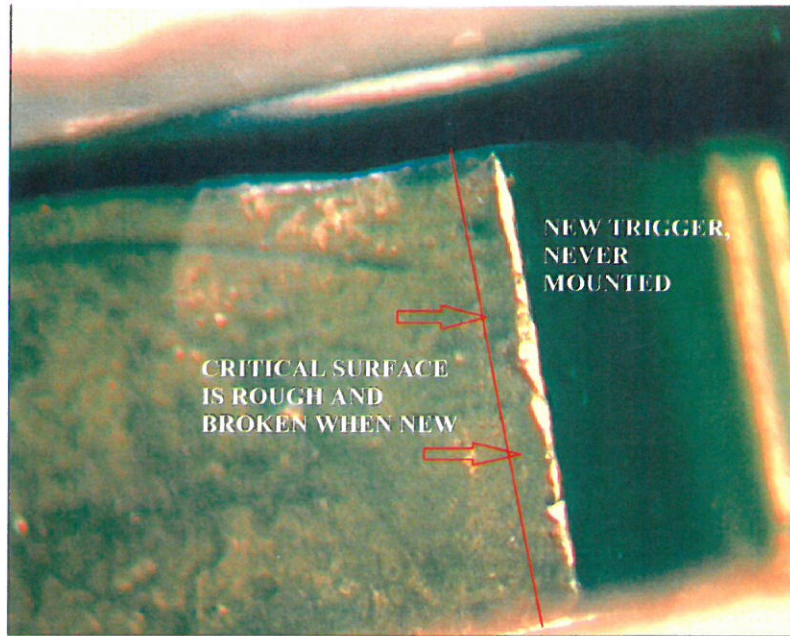
Casual visual observation was of a lightly 'used' trigger due to a smear of metal on the top surface of the sear and a light mark across the top of the trigger.



Microscopic pictures were taken of pertinent areas, but extensive microscopic examination was done with a Meiji EMZ stereo zoom microscope and dedicated ring and flexible focused lighting.

Sear examination showed a very light but distinctive smear where a cocking stud had overridden several times. Top of the trigger examination was done without disassembly of anything but the sear being folded back and out of the housing to give access to the critical area of the trigger.

Casual visual inspection of the critical trigger corner showed 'sparkles' of small breaks. Microscope examination and photography shows a trigger corner that most gunsmiths would recommend replacing with a new trigger. (pictures)



It is unknown if this damage was caused by testing, there is a sear mark on the new trigger, or possibly suffered impact damage during manufacture, shipping or storage.

The dents and chips seen in the critical edge of the trigger is something new in Remington triggers and have only been observed by this gunsmith in XMP triggers. Model 788 triggers with severe use will show some polish and rounding, but I've never observed breakage. The active connector corner in Walker triggers will polish in several thousand rounds but I've never had to replace one.

The chipping seen in the new 'unfired' trigger is exacerbated by the less than 90 degree angle of the critical corner. The acute angle is unnecessary to the design and detrimental to the strength of the most critical corner in the entire rifle. The acute angle makes an inferior material even more susceptible to breakage.

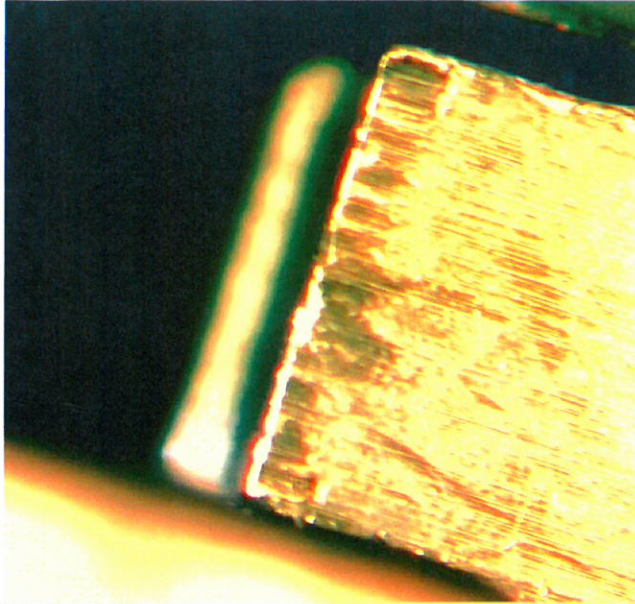
The XMP trigger was mounted in a Mohawk M600 receiver (A6483565) that is a gunsmith's salvage of a 'blown-up' rifle and rebuilt for bench-rest use. The OEM (single sear, bolt lock, folded housing) trigger was removed and the new XMP installed.

The new XMP trigger pull was approximately 4 lbs, short, crisp and entirely acceptable as a combination target and hunting trigger. The safety lift was correct by visual inspection at an estimated .014. The safety detents were good, operation was hunter quiet enough and all test and eyeball dimensions were at least to factory specs. The sear engagement appeared to be at least .020 and so is slightly more than is usually seen in Remington triggers that feel as good as this one did. I am impressed with the correct geometry that produces a usable trigger pull with .020 sear engagement. It indicates very good design of the trigger geometry.

The rifle was cocked and the trigger pulled 100 times with the first ten cycles being a test of safety function, perch test and careful manipulations and careful inspections of each operation. The trigger was then dismounted and taken for stereo-microscopic examination and photography.

Inspection showed bright smearing of the electroless nickel plating of the critical corner of the trigger.

The sear overlap area could be plainly seen. The toughness of the plating is evident in the high places taking abuse from the sear, but only the high places. There was no further chipping or flaking detected, but the sharp corners of previous breaks were rounded a slight amount. Photographs were taken but not of good quality.

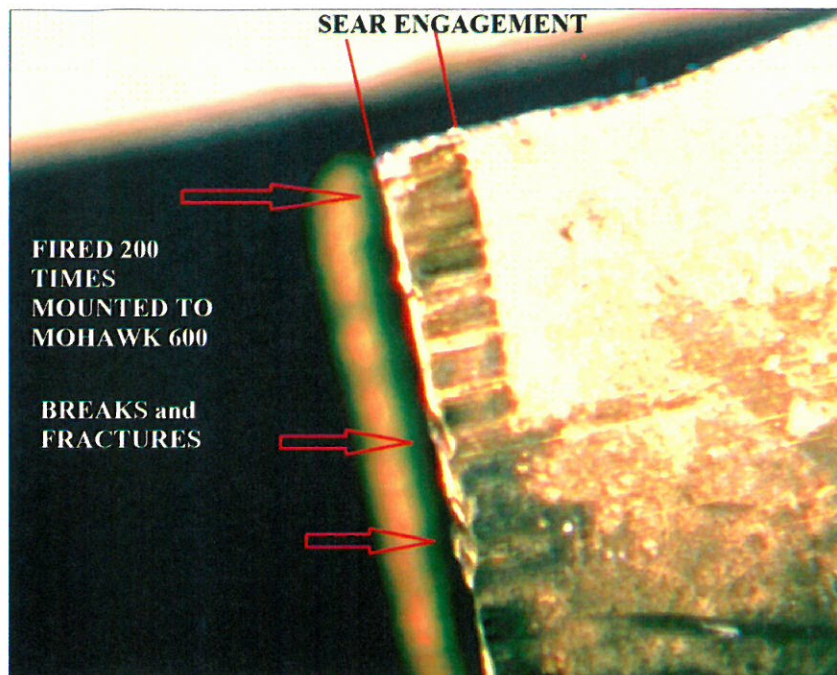


XMP after 100 pulls.

The XMP was re-mounted in the Mohawk M600 action, carefully examined in feel, function, freedom of movement for ten cycles followed by an additional 90 cocks and trigger pulls for a total of 200 firings of the trigger.

Stereo-microscope examination showed the small dab of red grease applied to the cocking cam had migrated to the cocking stud and top of the sear, as expected. That immediately reduced the apparent wear on the sear surface by smearing of the top of the sear at the cocking stud contact patch. Note: Cocking stud face is square on this early gun, not rounded as found in new Model 700s that causes excess wear of the sear surface.

The trigger surface was further polished and smeared by the sear and the increased area of the smears seemed to reach a parity with the abrasive resistance of the plating. A further test of one hundred more pulls showed the surface wear had slowed considerably. It is not known if a slight transfer of lubrication was made during the inspections between shot series but that is likely and such a very slight amount of lubrication will obviously increase the life of the critical trigger surface.



The chips and flakes and dents present when new have been rounded and worn so that a portion of the edge is worn away, more than likely matching a corresponding profile in the active sear edge, but that was not confirmed or attempted.

No additional chips from the edge are seen.

From my extensive experience in the field of wearing of hard steels in the gun industry as well as mining, timbering and steel making itself, the wear patterns seen in the test trigger indicates less than half the life of the trigger has been expended, but the wear showing is much more than should be expected from traditional trigger materials. The XMP trigger is made of inferior materials.

Examination of the XMP sear shows very little degradation of surfaces or edges. I'm confident the XMP sear when used with a flat-faced cocking stud will outwear the rifle.

The trigger assembly was degreased with brake cleaner and the silver gray sealant that filled the socket in the safety block screw was removed by small pick. The 'sealing' of the screw should be sufficient to keep most unauthorized 'fiddling' to a minimum.

The trigger was re-assembled on the Mohawk M600 action

The safety block screw was removed without application of heat to break the red loctite that was very well applied and effective at preventing easy adjustment or removal. The force needed to remove the screws should be sufficient to keep unauthorized adjustments to a minimum. The safety block screw was cleaned with brake-clean and a SS brush. The safety block was brushed and sprayed and blown dry. The front of the trigger, in the area where the safety block-OT screw contacts it, was scored with a diamond needle file and re-cleaned chemically. The safety block screw end was roughened for better adhesive adherence and re-cleaned chemically.

Commercially available and widely used J-B Weld brand epoxy filler and adhesive was mixed

according to directions. An excess amount of epoxy was applied to the safety block screw then the screw was rolled to remove all but in the threads and clinging to the distal end. The screw was carefully replaced in the safety block and adjusted to touch the front of the trigger with the safety ON, then backed off about 1/6th a turn. This adjustment was done without movement of the trigger with the safety applied ON. I would imagine the factory specified .003 to .006 clearance is slightly more in the test trigger. It was observed an excess of epoxy is present (and photographed after curing).

The bolt was replaced without disturbing the safety and the action and trigger set aside at 89F for 15 hours. It is my opinion this one test will indicate if there is any chemical adhesive, filler or sealer strong enough to cause a trigger pull by manipulation of the safety.

After photographing the cured epoxy, the safety was pushed forward with no more than ordinary force and the rifle DID FIRE. This leaves the possibility that the same occurrence can be caused by LocTite 660 sealant and the reason for the XMP recall could be valid, but return of guns to the factory is uncalled for and counter-productive to making the rifles safe enough for use.

After testing the supplied trigger and observations made of XMP triggers in use in the field, it is my expert opinion the XMP trigger is deficient in materials which has already manifested itself in seriously degraded triggers being present in hunting rifles in the field. The MIM material used in the XMP trigger piece is improper for the use employed and is unduly dangerous to a shooting public that is accustomed to better quality and much longer life. The firing mechanism is the heart of good safety and there is no reason to degrade that critical part for no good reason.

Remington made good triggers for more than one hundred years, but suddenly and without explanation (beyond advertising hyperbole) changed the basic definition of fire-arms safety and security with the Walker and the Crittenden fire controls of the late 1940s. They then instituted a policy of denial of responsibility that has cost lives for more than six decades (and will for many more) and has forced other gun companies to either 'go cheap' or die. To allow Remington Arms Company, with Federal Court permission, to further degrade firearms safety by using a short-lived trigger would be a travesty to the American shooter and could very well affect our Second Amendment Rights.

I respectfully ask that my recent book, "UnSafe by Design: Forensic Gunsmithing and Firearms Investigations" **ISBN-10:** 0692343504 **ISBN-13:** 978-0692343500 be attached as further explanation to the Court of the dangers posed by Remington Arms Company if allowed to dodge what should be the responsibility of the manufacturer.